



TFT LCD Evaluation Specification

MODEL NO.: V185B1-L01

| | |
|----------------------|--|
| LCD TV Head Division | |
| AVP | |

| QRA Dept. | TVHD / PDD | | |
|-----------|------------|----------|----------|
| | DDIII | DDII | DDI |
| Approval | Approval | Approval | Approval |
| | | | |

| | |
|--|-----------------------|
| LCD TV Marketing and Product Management Division | |
| Product Manager | Ken Wu Sharon Chou |

1. GENERAL SPECIFICATIONS

1.1 GENERAL

| Item | Specification | Unit | Note |
|-------------------------|------------------------------------|-------|------|
| Active Area | 409.8(H) x 230.4(V) | mm | |
| Bezel Opening Area | 413.4(H) x 234(V) | mm | |
| Driver Element | a-si TFT active matrix | - | |
| Pixel Number | 1366 x R.G.B. x 768 | pixel | |
| Pixel Pitch (Sub Pixel) | 0.100 (H) x 0.300 (V) | mm | |
| Pixel Arrangement | RGB vertical stripe | - | |
| Display Colors | 16.7 millions | color | |
| Display Operation Mode | Transmissive mode / Normally White | - | |
| Surface Treatment | AG Coating,Hardness 3H | - | |

1.2 MECHANICAL

| Item | | Min. | Typ. | Max. | Unit | Note |
|-------------|---------------|-------|-------|-------|------|--------------|
| Module Size | Horizontal(H) | 429.9 | 430.4 | 430.9 | mm | |
| | Vertical(V) | 254.1 | 254.6 | 255.1 | mm | |
| | Depth(D) | 15.75 | 16.25 | 16.75 | mm | To PCB cover |
| Weight | | | 2000 | | g | |

2. ABSOLUTE MAXIMUM RATINGS

2.1 TFT LCD MODULE

| Item | Symbol | Value | | Unit | Note |
|----------------------|-----------------|-------|------|------|------|
| | | Min. | Max. | | |
| Power Supply Voltage | V _{CC} | -0.3 | 6.0 | | |
| Input Signal Voltage | V _{IN} | -0.3 | 3.6 | V | |

2.2 BACKLIGHT UNIT

| Item | Symbol | Test Condition | Min. | Type | Max. | Unit | Note |
|--------------|----------------|----------------|------|------|------|------------------|------|
| Lamp Voltage | V _W | Ta = 25 °C | — | — | 3000 | V _{RMS} | |

3. ELECTRICAL CHARACTERISTICS

3.1 TFT LCD MODULE

Ta = 25 ± 2 °C

| Parameter | | Symbol | Value | | | Unit | Note |
|-----------------------------|-----------------|-------------------|-------|------|------|------|------|
| | | | Min. | Typ. | Max. | | |
| Power Supply Voltage | | V _{CC} | 4.5 | 5.0 | 5.5 | V | |
| Power Supply Ripple Voltage | | V _{RP} | - | - | 150 | mV | |
| Rush Current | | I _{RUSH} | - | - | 3.0 | A | |
| Power Supply Current | White | I _{CC} | - | 0.50 | - | A | |
| | Black | | - | 0.85 | 0.95 | A | |
| | Vertical Stripe | | - | 0.75 | - | A | |

3.2 BACKLIGHT INVERTER UNIT

3.2.1 CCFL (Cold Cathode Fluorescent Lamp) CHARACTERISTICS (Ta = 25 ± 2 °C)

| Parameter | Symbol | Value | | | Unit | Note |
|--------------|----------------|-------|-------|------|-------------------|------------------------|
| | | Min. | Typ. | Max. | | |
| Lamp Voltage | V _W | - | (775) | | V _{RMS} | I _L = 7.0mA |
| Lamp Current | I _L | 6.5 | 7.0 | 7.5 | mA _{RMS} | |

4. INPUT TERMINAL PIN ASSIGNMENT

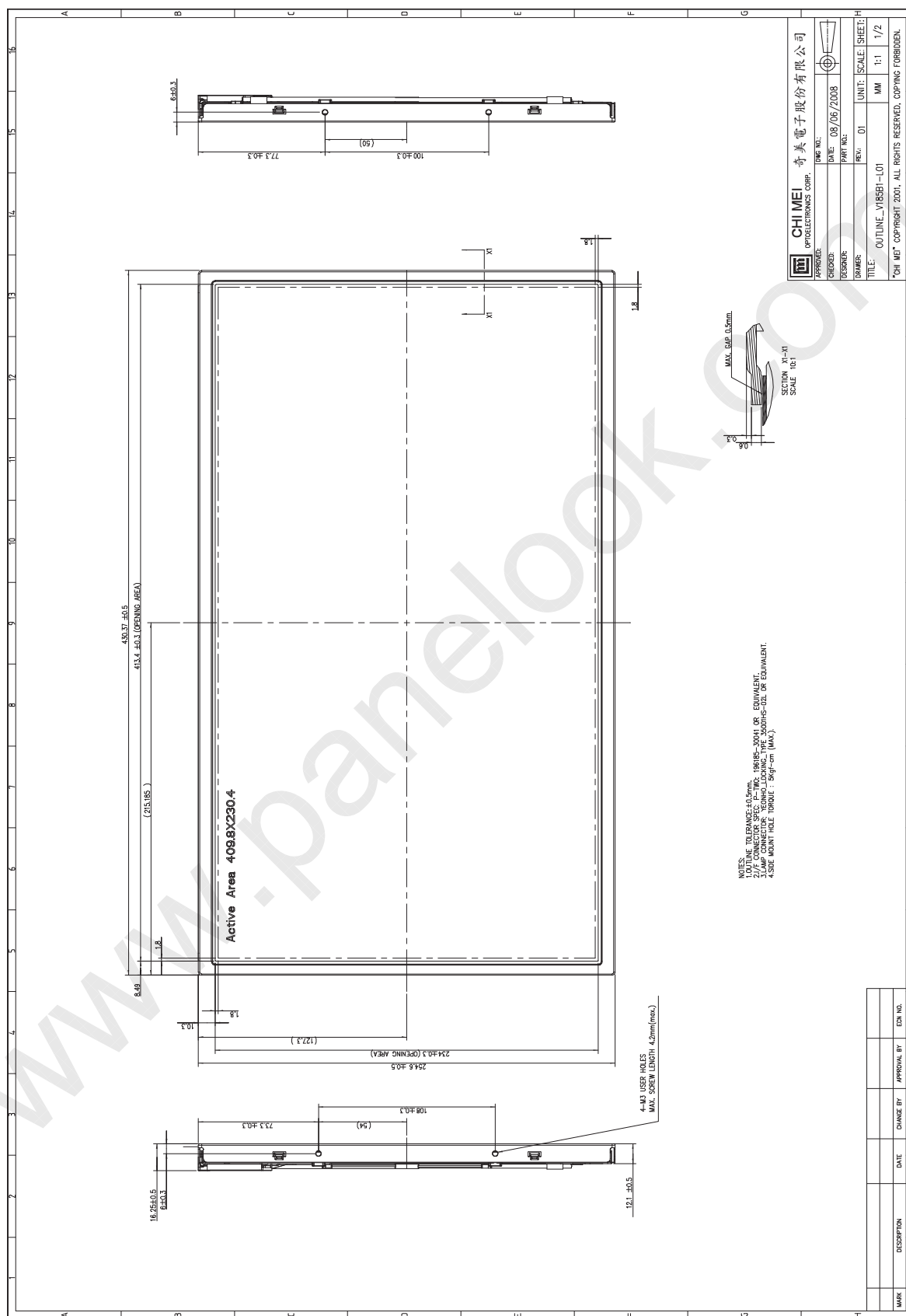
4.1 TFT LCD MODULE

| Pin No. | Symbol | Description | Note |
|---------|---------|---------------------------------------|------|
| 1 | NC | No Connection | |
| 2 | NC | No Connection | |
| 3 | NC | No Connection | |
| 4 | GND | Ground | |
| 5 | RX0- | Negative transmission data of pixel 0 | |
| 6 | RX0+ | Positive transmission data of pixel 0 | |
| 7 | GND | Ground | |
| 8 | RX1- | Negative transmission data of pixel 1 | |
| 9 | RX1+ | Positive transmission data of pixel 1 | |
| 10 | GND | Ground | |
| 11 | RX2- | Negative transmission data of pixel 2 | |
| 12 | RX2+ | Positive transmission data of pixel 2 | |
| 13 | GND | Ground | |
| 14 | RXCLK- | Negative of clock | |
| 15 | RXCLK+ | Positive of clock | |
| 16 | GND | Ground | |
| 17 | RX3- | Negative transmission data of pixel 3 | |
| 18 | RX3+ | Positive transmission data of pixel 3 | |
| 19 | GND | Ground | |
| 20 | NC | No Connection | |
| 21 | SELLVDS | Select LVDS data format | |
| 22 | NC | No Connection | |
| 23 | GND | Ground | |
| 24 | GND | Ground | |
| 25 | GND | Ground | |
| 26 | VCC | Power supply: +5V | |
| 27 | VCC | Power supply: +5V | |
| 28 | VCC | Power supply: +5V | |
| 29 | VCC | Power supply: +5V | |
| 30 | VCC | Power supply: +5V | |



5. OPTICAL CHARACTERISTICS

| Item | | Symbol | Condition | Min. | Typ. | Max. | Unit | Note |
|---------------------------|------------|---------------|---|-------|------|------|-------------------|------|
| Contrast Ratio | | CR | $\theta_x=0^\circ, \theta_y=0^\circ$ Viewing Normal Angle | (600) | 800 | | - | |
| Response Time | | Tr | | | 1.5 | 3.5 | ms | |
| | | Tf | | | 3.5 | 6.5 | | |
| Center Luminance of White | | L_c | | (230) | 300 | | cd/m ² | |
| Viewing Angle | Horizontal | θ_{x+} | CR \geq 10 | 75 | 85 | | Deg. | |
| | | θ_{x-} | | 75 | 85 | | | |
| | Vertical | θ_{y+} | | 70 | 80 | | | |
| | | θ_{y-} | | 70 | 80 | | | |

**6. MECHANICAL CHARACTERISTIC**

**CHI MEI**
OPTOELECTRONICS CORP.

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Model No.: V185B1-L01

Under Evaluation